

### **Abstract of the Disclosure**

5           A background event buffer manager (BEBM) for ordering and  
accounting for events in a data processing system having a processor  
includes a port for receiving event identifications (IDs) from a device, a  
queuing function enabled for queuing event IDs received, and a notification  
function for notifying the processor of queued event IDs. The  
10       BEBM handles all event ordering and accounting for the processor. The  
BEBM in preferred embodiments queues events by type with priority and by  
priority within type, and also handles sending acknowledgement to the  
device when processing on each event is concluded, and buffers the  
acknowledgement process. In particular embodiments the apparatus and  
15       method is taught as a packet processing router engine.